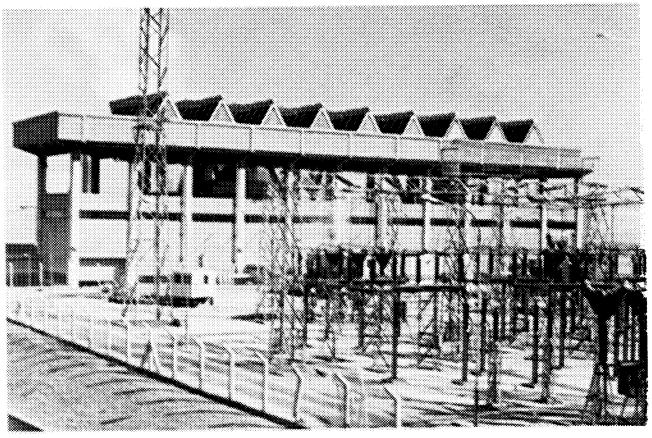

Power Station Design

Based in Philadelphia, Pennsylvania, Kuljian Corporation provides planning, design, engineering and construction management services, specializing in the design and construction of power generating plants, desalination/power complexes and power transmission systems. The accompanying photos are representative of some 200 power generation plants in more than 20 countries that bear the Kuljian name.

At left is the 66 megawatt Hussein Station at Zerqa, Jordan; shown below is Mooreland Station, Mooreland, Oklahoma, a 148 megawatt unit designed for the Western Farmers Electric Cooperative.

Among the company's most recent projects are two 500 megawatt steam power plants in Singrauli, India. In the course of designing these units, Kuljian engineers used a NASA-developed computer program supplied by the Computer Software Management and Information Center (COSMIC), NASA's software dissemination facility, which routinely supplies to industry government-developed computer programs that have secondary utility. The program—WASP (Calculating Water and Steam Properties)—was used by Kuljian to optimize the design of the power station, with special emphasis on heat balance in the steam turbine cycles. Similar applications are foreseen in optimizing the thermal design of other Kuljian engineered large power generating units. The company reports that availability of the WASP program allowed substantial reductions in the lead time and cost of software required for the Singrauli design project.